



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/614,041	07/08/2003	Mario Polegato Moretti	240034US6	6723
22850	7590	07/16/2004	EXAMINER JAGAN, MIRELLYS	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			ART UNIT 2859	PAPER NUMBER

DATE MAILED: 07/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/614,041	Applicant(s) POLEGATO MORETTI ET AL.	
	Examiner Mirellys Jagan	Art Unit 2859	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5,9 and 12-29 is/are rejected.
- 7) ☒ Claim(s) 6-8,10 and 11 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 7/8/03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Objections

1. Claim 1-29 are objected to because of the following informalities:

In claim 1, lines 9-12 appear to be describing the rigid structure instead of the cladding.

In line 10, "adapted" should be changed to --capable --, and in line 15, "metered" should be changed to --metering a--. In lines 13-14, there is lack of antecedent basis on the claim for the cladding having 'regions'. In line 17, it is not clear from what element the electric power is dissipating.

In claim 2, it is not clear from what element the relative humidity is being sensed by the sensing means.

In claim 12, "metered" should be changed to --metering a--.

In claim 14, it is not clear which element is being referred to by the term "thereof" in line 6, e.g., is the carriage being actuated, or the footing?

In claim 15, it is not clear to what element the plate is coupled to in line 4. The claim states that the plate is coupled to "said frame", but claim 14 states that the "frame" is made up of the footing, beam, first and second actuators, carriage, and roller. Therefore, it is not clear which one of these elements the plate is coupled to. Line 4 further states that the plate is coupled to "said frame and to said roller", which is not clear since the roller is part of the frame.

Furthermore, it is not clear what is meant by "a position step in which the shoe is fully raised" in lines 9-10, e.g., the shoe is fully raised from what? In addition, it is not clear if the "return means" is the same element as the means that rigidly couple the plate to the frame and roller.

Art Unit: 2859

In claim 19, there is lack of antecedent basis in the claim for the plate being capable of “sliding”.

In claim 22, it is not clear how the sensors are arranged on the footing “with respect to said rigid structure” since the rigid structure is not claimed to be structurally related (connected) to the frame (see paragraph 3 below with respect to claim 14).

In claim 25, there is lack of antecedent basis in the claim for “said speed and synchronization control means”.

In claim 29, there is lack of antecedent basis in the claim for “for constant-humidity tests” in line 1. In line 4, it is not clear which element is being referred to by the term “thereof”, e.g., are the cladding and sensing means arranged on the shoe or the rigid structure?

Claims 3-11, 13, 16-18, 20, 21, 23, 24, and 26-28 are objected to for being dependent on an objected base claim. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 2 and 12-29 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01.

In claim 2, the omitted structural cooperative relationship is between the humidity sensing means with the remaining elements of the apparatus (the rigid structure, heating means,

Art Unit: 2859

cladding, sensor means, supply means, and measuring means), e.g., the humidity sensing means are sensing the humidity of what?

In claim 14, the omitted structural cooperative relationships are between the beam and the first actuator with the remaining elements of the frame, i.e., the footing, second actuator, carriage, and roller. As claimed, the footing, carrier, roller, and second actuator are all structurally related with each other forming one part; and the first actuator and the beam are structurally related to each other forming a second part, but there is no structural relationship between the first and second parts. Furthermore, there is lack of structural relationship between the rigid structure (of claim 1) and the elements of the supporting frame. The limitation "a first actuator fixed on said beam for vertical reciprocating translational motion of said rigid structure" in lines 2-3 is a recitation of the intended use of the beam, and is not a positive limitation, i.e., does not positively structurally connect the beam with the rigid structure.

In claim 15, the omitted structural cooperative relationship is between the plate and the frame. As claimed, the plate is rigidly coupled to "the frame", which is made up of the footing, beam, first and second actuators, carriage, and roller. Therefore, it is not clear which one of these elements the plate is coupled to. Line 4 further states that the plate is coupled to "said frame and to said roller", which is not clear since the roller is part of the frame.

In claim 20, there is lack of structural relationship between the load cell with the first actuator and rigid structure since the rigid structure is not claimed to be structurally connected to the first actuator or the beam, as stated above with respect to claim 14.

Art Unit: 2859

In claim 27, the omitted structural cooperative relationship is between the ventilation means with the rigid structure or frame. As claimed, it is not clear if the ventilation means are a part of the frame, or is they are a part of the rigid structure.

Claims 12, 13, 16-19, 21-26, 28, and 29 are rejected for being dependent on a rejected base claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 9, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,749,259 to Hamouda et al [hereinafter Hamouda].

Hamouda discloses an apparatus for determining the comfort level of a fabric that is known in the prior art, the apparatus comprising:

a rigid structure (hot plate) made of a heat-conducting material that can duplicate the contour of a foot, the rigid structure being divided into at least three regions (inner, ring, and base) that are thermally insulated from each other (by air gap A and by foam insulation);

heating means (electrical heaters) for heating each of the regions to a presettable temperature;

Art Unit: 2859

cladding (fabric) for surrounding the rigid structure, the cladding made of a soft material whose structure is permeable to liquids and is capable of absorbing water and distributing water over the surface of the rigid structure that it surrounds;

sensor means (thermocouples) for sensing an external temperature of a region of the cladding corresponding to the three regions;

a pump and controlling unit for supplying metered amounts of water to the rigid structure; and

means (thermistor, and DC power supplies) for determining a level of electric power used, i.e., dissipated, and keeping constant the temperature of the regions (see column 1, lines 24-column 2, line 17).

Furthermore, the term "adapted to" is not a positive limitation since it has been held that the recitation that an element is "adapted to" perform a function only requires the ability to so perform. It does not constitute a limitation in a patentable sense. In this case, the cladding of Hamouda is a fabric, which is capable of performing the claimed functions.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hamouda in view of U.S. Patent 5,979,235 to Kurz et al [hereinafter Kurz].

Art Unit: 2859

Hamouda discloses a prior art apparatus having all of the limitations of claim 2, as stated above in paragraph 6, except for the apparatus having humidity sensors.

Kurz discloses an apparatus for measuring the comfort of a fabric, the apparatus comprising temperature and humidity sensors for determining how the fabric manages humidity, i.e., breathes. Kurz teaches that humidity is a useful factor to determine when testing the comfort of a fabric.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the prior art apparatus disclosed by Hamouda by adding humidity sensing means, since Kurz teaches that humidity is a useful factor in determining the breathability or comfort of a fabric being tested.

8. Claims 3-5 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamouda.

Hamouda discloses a prior art apparatus having all of the limitations of claims 3-5 and 13, as stated above in paragraph 6, except for the material of the rigid member being aluminum; the heating means being resistive elements adjusted by thermoregulators; and the pump being peristaltic.

Hamouda further discloses his own apparatus for testing a material, the apparatus comprising a rigid structure made of aluminum; electrically powered resistance heaters having temperature regulating means for adjustably heating the structure to a presettable temperature; cladding (fabric) for surrounding the rigid structure, the cladding made of a soft material whose structure is permeable to liquids and is capable of absorbing water and distributing water over

Art Unit: 2859

the surface of the rigid structure that it surrounds; sensor means (thermocouple) for sensing an external temperature of a region of the cladding; pumping means for supplying metered amounts of water to the rigid structure, wherein the pumping means may be electrically powered pumps; and means for determining a level of electric power used, i.e., dissipated, and keeping constant the temperature of the regions. Hamouda teaches that aluminum is a useful material for the rigid structure since it is thermally conductive, and that resistive heaters are useful as temperature regulators for adjustably controlling the temperature of the rigid structure (see column 4, line 59-column 5, line 53; column 6, lines 3-7 and 38-51; and column 7, lines 1-5 and 35-60).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the prior art apparatus disclosed by Hamouda by using aluminum as the material for the rigid member, and using electrically powered resistance heaters since Hamouda teaches that aluminum is a useful material for the rigid structure since it is thermally conductive, and that resistive heaters are useful as temperature regulators for adjustably controlling the temperature of the rigid structure. Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the prior art apparatus disclosed by Hamouda by using a peristaltic pump since Hamouda teaches that electrical pumps may also be useful in pumping water through the rigid structure when testing a material.

Allowable Subject Matter

9. Claim 6-8, 10, and 11 would be allowable if rewritten or amended to overcome the objections set forth in this Office action, and to include all of the limitations of the base claim and any intervening claims.

Art Unit: 2859

10. Claims 14 and 29 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, and the objections set forth in this Office action, and to include all of the limitations of the base claim and any intervening claims.

11. Claims 15-28 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, and the objections set forth in this Office action.

12. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record does not disclose or suggest the following in combination with the remaining limitations of the claims:

An apparatus for measuring breathability and comfort level of a shoe, the apparatus comprising

resistive elements embedded in the self supporting material that constitutes the rigid structure (see dependent claim 6);

sensor means that are constituted by thermocouples that are fixed to the at least one cladding (see dependent claim 7);

a cladding that is made of a soft material that is capable of absorbing water in an amount equal to approximately 400% by weight (see dependent claim 8);

the claimed supporting frame (see dependent claim 14); or

a shoe fitted on the rigid structure with the at least one cladding and with the humidity sensing means arranged thereon for activating the water pump when the humidity internal to the

Art Unit: 2859

rigid structure drops below a set minimum value to return the humidity to about the minimum set value (see dependent claim 29).

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents and publications disclose a shoe-testing device:

U.S. Patent 6,487,891 to Moretti

U.S. Patent 4,961,339 to Kleis et al

U.S. Patent 1,015,291 to Byrnes

U.S. Patent 4,432,223 to Paquette et al

U.S. Patent 4,327,572 to Pitman et al

U.S. Patent 4,130,007 to Hayashi

U.S. Patent Application Publication 2003/0156619 to De Monte et al

Japanese Patent 06323963 to Sugimori et al

EPO Patent 264526 to Funck

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mirellys Jagan whose telephone number is 571-272-2247. The examiner can normally be reached on Monday-Friday from 9AM to 4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on 571-272-2245. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2859

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MJ
July 14, 2004



Diego Gutierrez
Supervisory Patent Examiner
Technology Center 2800